

**What Is Claimed Is:**

1           1.    A system of automated network device discovery,  
2 comprising:

3           a storage device; and

4           a discovery module, configured to issue a series of relayed  
5           single-destination simple network management  
6           protocol (SNMP) requests to a plurality of network  
7           devices to acquire a plurality of Cisco discovery  
8           protocol (CDP) neighbor device data, generate a  
9           plurality of network device inventory records  
10          corresponding to the CDP neighbor device data, and  
11          store the network device inventory records to the  
12          storage device.

1           2.    The system of claim 1 wherein the discovery module  
2 further stores the CDP neighbor device data which is newly  
3 discovered to a queue and pops the CDP neighbor device data out  
4 of the queue for successive CDP neighbor device discovery.

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1           3.     The system of claim 2 wherein the CDP neighbor device  
2     identity is popped out of the queue on a first-in-first-out  
3     (FIFO) basis.

1           4.     The system of claim 1 further comprising a display  
2     module, providing a graphical user interface (GUI) to facilitate  
3     selecting and browsing the network device inventory records.

1           5.     The system of claim 1 wherein the network device  
2     stores a management interface base (MIB) file containing the CDP  
3     neighbor device data.

1           6.     The system of claim 2 wherein the network device  
2     stores a management interface base (MIB) file containing the CDP  
3     neighbor device data.

1           7.     The system of claim 3 wherein the network device  
2     stores a management interface base (MIB) file containing the CDP  
3     neighbor device data.

1           8.     A method of automated network device discovery, the  
2     method comprising using a computer to perform the steps of:

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3           issuing a series of relayed single-destination simple  
4           network management protocol (SNMP) requests to a  
5           plurality of network devices to acquire a plurality  
6           of Cisco discovery protocol (CDP) neighbor device  
7           data; and  
8           generating a plurality of network device inventory records  
9           corresponding to the CDP neighbor data.

1           9.    The method of claim 8 wherein the CDP neighbor device  
2           data is stored in a queue and popped out of the queue for  
3           successive CDP neighbor device discovery.

1           10.   The method of Claim 9 wherein the CDP neighbor device  
2           data is popped out of the queue on a first-in-first-out (FIFO)  
3           basis.

1           11.   The method of claim 8 wherein the CDP neighbor device  
2           data is stored by a management interface base (MIB) file in the  
3           network device.

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1           12.   The method of claim 9 wherein the CDP neighbor device  
2   data is stored by a management interface base (MIB) file in the  
3   network device.

1           13.   The method of claim 10 wherein the CDP neighbor device  
2   data is stored by a management interface base (MIB) file in the  
3   network device.

1           14.   A machine-readable storage medium for storing a  
2   computer program which when executed performs a method of  
3   automated network device discovery, the method comprising the  
4   steps of:

5           issuing a series of relayed single-destination simple  
6           network management protocol (SNMP) requests to a  
7           plurality of network devices to acquire a plurality  
8           of Cisco discovery protocol (CDP) neighbor device  
9           data; and

10          generating a plurality of network device inventory records  
11          corresponding to the CDP neighbor data.

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1           15. The machine-readable storage medium of claim 14  
2 wherein the CDP neighbor device data is stored in a queue and  
3 popped out of the queue for successive CDP neighbor device  
4 discovery.

1           16. The machine-readable storage medium of claim 15  
2 wherein the CDP neighbor device data is popped out of the queue  
3 on a first-in-first-out (FIFO) basis.

1           17. The machine-readable storage medium of claim 14  
2 wherein the CDP neighbor device data is stored by a management  
3 interface base (MIB) file in the network device.

1           18. The machine-readable storage medium of claim 15,  
2 wherein the CDP neighbor device data is stored by a management  
3 interface base (MIB) file in the network device.

1           19. The machine-readable storage medium of claim 16  
2 wherein the CDP neighbor device data is stored by a management  
3 interface base (MIB) file in the network device.